FIRST EO-1 TECHNOLOGY WORKSHOP

USGS AUDITORIUM IN RESTON, VIRGINIA

JANUARY 11, 2001

The New Millennium Program's first Earth-observing mission (EO-1) is a technology validation mission designed to flight-validate new technologies applicable to a future Landsat follow-on mission such as the Landsat Data Continuity Mission (LDCM).

The first of several EO-1 Technology Workshops will be held on January 11, 2001 at the USGS Auditorium in Reston, Virginia beginning at 8:30 AM. This one-day workshop is organized to provide interested parties with background information about the new technologies to be flight-validated by the EO-1 mission and to discuss the various ways that these new technologies might be infused into future science missions such as the LCDM. Consequently, this First EO-1 Technology Workshop occurs on the third day of the First Landsat Data Continuity Workshop held at the same location on January 9-11.

The EO-1 mission contains three imaging instruments incorporating five new technologies and six technologies associated with the spacecraft. The three EO-1 imagers are co-aligned and include the Advanced Land Imager (ALI), a small, lightweight ten-band multispectral "push broom" imager of 30 meter spatial resolution and improved signal-to-noise performance, a 220-band, twin-grating hyperspectral imager of 30 meter spatial resolution and 10 nanometer spectral resolution that is known as the Hyperion, and a 256-band wedge-based hyperspectral imager of 250 meter spatial resolution designed for atmospheric correction both for the EO-1 mission and the current Landsat-7 mission. Additional information about the EO-1 mission and its technologies may be obtained from our web site at ***http://eo1.gsfc.nasa.gov*** .

The EO-1 mission was launched on November 21, 2000 and will be in position one minute behind Landsat-7 by mid-December. Flying formation with Landsat-7 provides the opportunity for numerous paired scene comparisons between the EO-1 instruments and the imager on the Landsat-7 mission. Early images and preliminary validation data from the EO-1 mission will be presented at this first workshop.

There are multiple opportunities for interested parties to participate in the EO-1 mission. Beginning in June 2000, a small portion of the EO-1 tasking opportunities will be potentially available to interested parties to be utilized on a non-interference basis relative to the planned flight validations of the EO-1 technologies. Imagery from the planned technology validations will be available to interested parties for the cost of reproduction as the validation of the new technologies is completed. Beginning in September 2000, NASA will consider the establishment of an EO-1 Extended Mission as an orbiting technology test bed. Interested parties will be given the opportunity to participate in this Extended Mission that will include additional tasking opportunities. In principle, participation will be on a cost-sharing basis that will be negotiated at the time of definition. Technology infusion opportunities will exist for each of the EO-1 technologies once their respective flight-validations have been completed. A variety of legal instruments are available to support the interested party's participation in the EO-1 mission or the infusion of the EO-1 technologies into future applications. These will be individually negotiated through a process to be presented at the first workshop. This technology infusion process shall remain consistent with all ITAR regulations.

The Stennis Space Center (SSC) is responsible for developing commercial applications involving EO-1 technologies. The SSC has representation in the current validation team and will provide additional opportunities in the potential EO-1 Extended Mission.

The EO-1 mission is also a participant in the AM Constellation led by the Landsat-7 mission, the EO-1 mission one minute later, the Argentine SAC-C mission about 15 minutes behind EO-1, and the EOS Terra mission another 15 minutes behind the SAC-C mission. Coordinated image collection between these missions is potentially available to participants in the EO-1 Extended Mission.

Additional information on the workshop, including registration, may be obtained at ***http://ldcm.usgs.gov or www.westoverconferences.com/ldcm.***

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AGENDA

8:30 Welcome

8:45 NMP Perspective

9:00 Meeting Objectives

9:15 Overview of the EO-1 Mission

9:45 Technology Transfer and Infusion Process

10:15 Break

EO-1 Instruments:

10:30 Advanced Land Imager

11:30 Lunch

12:30 Hyperion

1:30 Atmospheric Corrector

2:00 Science Validation Process

3:00 Break

Overview of EO-1 Spacecraft Technologies*:

3:15 WARP
X-Band Phased Array Antenna
Carbon-Carbon Radiator
Pulse Plasma Thruster
Enhanced Formation Flying
Lightweight, Flexible Solar Array

4:15 Next Steps and Near-term Schedule

5:00 Adjourn

*** The EO-1 Spacecraft Technologies will be presented in more detail at the Second EO-1 Technology Workshop planned for August 2001**